my comfort
by Saint-Gobain

Multi-Comfort buildings
For your comfort, health & wellbeing

Stacey Temprell, Residential Sector Director, Saint-Gobain UK & Ireland
Our aim to create great spaces has driven us to launch the Multi-Comfort building concept.

Incorporating Passive House design, it’s a way of designing and building sustainable, comfortable and healthy home and working environments.
Typically, we spend just 10% of our time outside
We spend 90% of our time
Inside buildings or our vehicles
So, the buildings where we spend our time, are having a significant impact on our comfort, health and wellbeing...
What if, rather than just minimising negative impacts, buildings can be designed and built to have a positive impact on people and the environment?
By carefully considering all the different areas of comfort that a building can provide, we are able to improve people’s wellbeing within buildings.
Saint-Gobain
One of the 100 Most Innovating Companies in The World

- 7 Main R&D Centres
- 3700 employees
- €400m spend on R&D annually
- Over 400 patents filed in 2012
- 1 in 5 Saint-Gobain products sold today was developed in the last 5 years
- 12 research centres and about 100 development units worldwide

Current Innovations:
- Development of “Smart” materials
- Products and systems with adjustable performance
- New capabilities to manufacture
- Co-development with digital technologies/startups

Building Physics
Acoustics
Air Quality
Daylighting
Energy efficiency & environmental impact of processes
Thermal Performance
Fire Safety
High Performance Materials
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#### THERMAL
- **Heating & Cooling Energy Demand**
  - PH: 15 kWh/m²/p.a or 10 W/m²
- **Relative Humidity**
  - PH: 40-60%
- **Overheating Prevention**
  - PH: Limit Value: 10%
  - 0.01 W/mK
- **Thermal Bridging**
  - PH: 0.01 W/mK
  - +3 dB of current acoustic regulation level for building type
  - N/A in most cases

#### AUDIO
- **Acoustic Sound Insulation (Design Values)**
  - In line with current reverbation control regulation and/or guidance level for building type
  - N/A

#### VISUAL
- **Daylight Autonomy**
  - 8am - 6pm DA: 60% at 5001ux
  - BREEAM: Optimise existing openings through glazing spec.
<table>
<thead>
<tr>
<th>INDOOR AIR</th>
<th>ECONOMIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airtightness (n50)</td>
<td>Primary Energy Demand</td>
</tr>
<tr>
<td>PH</td>
<td>PH</td>
</tr>
<tr>
<td>Ventilation &quot;&quot;&quot;&quot;</td>
<td>Fabric U-Values</td>
</tr>
<tr>
<td>PH</td>
<td>Window U-Value</td>
</tr>
<tr>
<td>Control of VOC's (3 routes to compliance)</td>
<td>Installed Value</td>
</tr>
<tr>
<td></td>
<td>OPEX vs CAPEX</td>
</tr>
<tr>
<td></td>
<td>Analysis</td>
</tr>
<tr>
<td></td>
<td>Embodied Energy Analysis</td>
</tr>
</tbody>
</table>

**Use of EN15616 tested materials or**

**Internal materials finishes that remove VOC concentration or**

<table>
<thead>
<tr>
<th>Total VOC Concentration &lt;300μg/m³</th>
<th>Total VOC Concentration &lt;150μg/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Formaldehyde levels &lt;100μg/m³</td>
<td>+ Formaldehyde levels &lt;100μg/m³</td>
</tr>
<tr>
<td>120kWh/m²/pa</td>
<td>To be agreed with Passivehaus Institute (PHI) based on a review of electrical appliances &amp; equipment planned</td>
</tr>
</tbody>
</table>

- 0.08 - 0.15 W/m²K

- 1.1 Uw DGW and 0.8 Uw TGW

**Provision of design statement used for planning that accounts for potential future building use and adaptability**

(Includes: Maintenance costs, standard build cost comparison with Multi-Comfort build cost, ROI based on running costs)

**Using Type III EPD Verified (EN15804 Compliant) LCA/EPD Data of all Fabric and M&E components to inform specification**
Keeps itself warm using very little energy

Without the need for radiators

Saving you money to spend on what you like
No draughts, even on the floor

Every wall is warm to the touch

Keeps your ideal indoor temperature, all year round
Where you can’t hear the neighbours.

Protects you from the noise outside.

But you can make noise without disturbing others.
Where sounds you want to hear are crystal clear.

You’re not distracted by background noise.

You can hear perfectly, anywhere in the room.
Close-up work is easy and colors are rich.

Brings the outdoors inside, making you feel good.

Full of natural light, without glare.
Constant supply of fresh air means rooms never feel stuffy, keeping you feeling alert all day.

Keeps outdoor pollution outside

Actively purifies the air: VOC’s, moisture, odours
Doesn’t cost the earth to build...

Without the worry of high energy bills

Needing little maintenance

... nor the environment
😊 Faster healing
😊 Reduced bed-time
😊 Happier staff
😊 Improved productivity
😊 Reduced absenteeism
😊 Increased job satisfaction
😊 Improved concentration
😊 Better Communication
😊 Higher test results
Multi-Comfort Reference: New-Build
The Kings School, Worcester
Multi-Comfort Reference: Renovation
4 Bed Masonry Empty-Home, Nottingham
A unique capability to provide products and solutions for industry.

An unparalleled breadth and depth of network.
Weber
Leca® Insufill
A lightweight expanded clay aggregate insulation fill material.

Celotex
GD5000
Premium performance PIR insulation bonded to 9.5 mm plasterboard specifically for use in dry-lining applications.

Celotex
FR5000
Premium performance PIR insulation suitable for use in floors, walls and roofs.

Isover
Isover Frame Façade Slab
A low lambda rigid glass mineral wool slab providing a continuous layer of insulation around timber frame constructions.

Isover
Isover Vario System
A high performance membrane unique in providing excellent levels of airtightness with unparalleled protection against moisture.

British Gypsum
Gyproc Soundcoat Plus
A gypsum-based parged coat used on Masonry walls to improve thermal and acoustic performance.

Weber
weber.therm XM
Lightweight external wall insulation system incorporating thin-coat polymer render and meshcloth reinforcement.

Weber
weber.therm XP
A unique external wall insulation system, using specially designed one-coat mineral render.
**Isover**
Isover Climaver
Pre-insulated ductwork system that offers excellent thermal and acoustic performance in a fire safe system.

**Saint-Gobain Glass**
sgg COOL-LITE® SKN
A high performance solar control product range that features excellent levels of neutrality, light transmittance and g-factor.

**Saint-Gobain Glass**
sgg PLANITHERM® ONE T
Offers superior thermal insulation properties for the most demanding of glass specifications, where neutrality and excellent performance are paramount.

**SageGlass**
SageGlass®
An electronically tintable glass for windows, skylights and curtain walling allowing complete control of solar heat gain and glare.

**Jewson/Graham/Gibbs & Dandy**
Nest Learning Thermostat™
A Thermostat and Programmer in one that learns the thermal efficiency of the home and then optimises based on the occupancy and conditions its senses.

**Saint-Gobain Glass**
sgg PLANITHERM TOTAL+
A high performance low-E glass and is one of the most energy efficient window glass products available today.

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For a full, up-to-date listing of Saint-Gobain products and solutions, please visit [www.multicomfort.co.uk](http://www.multicomfort.co.uk)
British Gypsum
GypWall QFRT
A lightweight, non-loadbearing acoustic separating wall system.

British Gypsum
GypWall robust
A high impact-resistant partition system for use where a more durable structure is required.

British Gypsum
SILENT FLOOR
A flooring system offering enhanced levels of sound insulation, achieved by providing an acoustically decoupled ceiling system.

Isover
Acoustic Partition Roll (APR1200)
Provides high levels of acoustic insulation in walls and floors to meet acoustic requirements in domestic and non-residential applications.

British Gypsum
Drilyner S
Upgrade to existing walls with Drilyner S, incorporating GypCrete Inline—a sound insulating plasterboard laminate.

British Gypsum
Two coat plaster
Thistle plasters offer a full range of specific and multi-purpose solutions for a wide range of internal plastering needs and backgrounds.

Isover
Isover Climaver
Pre-insulated ductwork system that offers excellent thermal and acoustic performance in a fire-safe system.

Saint-Gobain PAM
Ensign EEZI-FIT
Cast iron above ground drainage system, kitemarked approved to BS EN877.

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British Gypsum
Gyptone quattro
A sound-absorbing perforated gypsum system ideal for use in acoustic walls, ceilings or modular units.

British Gypsum
Euroacoustic Tonga
A high performance ceiling system that offers excellent sound absorption, fire protection, light reflectance and humidity resistance.

Ecophon
Akusto Wall
Designed to complement acoustic ceilings, Ecophon Akusto Wall panels provide additional absorption in a range of colours and surfaces.

Ecophon
Solo
Allows freedom of design and the opportunity to easily retrofit acoustic treatments into existing spaces.

Saint-Gobain Glass
sog STADIP SILENCE®
Significantly reduces the effect of exterior noise in buildings situated near noisy locations such as airports.

Performance Plastics
Green Glue
Noiseproofing Compound
A sound insulation compound, acting as a damping layer between construction boards.

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International Timber
Accoya
Imagine a wood that is sustainable, has zero toxicity and provides dimensional stability and durability that exceeds all durable timbers.

International Timber
Western Red Cedar
Sourced from West coast of Canada with either PEFC or CSA certification. It is ideal for internal or external cladding.

Weber
weber.pral M
One coat, through coloured monocouche render.

Weber
weber.floor 4650 design colour
A through coloured, pump applied self levelling floor screed.

British Gypsum
GypWall curve
A highly cost-effective system specially designed to provide curved walls and linings.

Saint-Gobain Glass
sgg PLANICLEAR®
The standard substrate of Saint-Gobain Glass. A mid-iron glass which features neutral aesthetics and higher light transmission.

Saint-Gobain Glass
sgg DIAMANT™
A unique colourless glass with very low iron oxide content; as a result the glass features excellent neutrality.

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visual comfort

SAINT-GOBAIN
SUSTAINABLE HABITAT

MULTI-COMFORT
British Gypsum
ACTIVair technology
Improves the indoor air quality to make indoor spaces healthier.

British Gypsum
Gyproc SoundBloc with ACTIVair technology
A gypsum plasterboard with a higher density core and ACTIVair technology.

British Gypsum
Thistle PureFinish plaster skim
A gypsum plaster with ACTIVair technology.

Weber
weber.set rapid SPF
A rapid-setting, low-dust, cement-based floor and wall tile adhesive.

Graham
Warmflow Ground Source Heat Pump
Used with an MVHR system to pre-warm the air brought into the building.

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Multi-Comfort buildings make economic sense

- Upfront material cost increases in higher performing buildings are offset many times by a decrease in running costs
- The value of your building will increase
- The occupants get to enjoy comfort, improved health and wellbeing while using it
How to build to Multi-Comfort levels
Courses run from Saint-Gobain technical Academies
Opportunity for contractors to bid for this growing market

Employ the right people to reduce the cost
WELLNESS IS NOW A $3.4 Trillion Global Industry

3x BIGGER Than the Worldwide Pharmaceutical Industry!
Global Wearable Device Unit Shipments Forecast

We Are Here

35% CAGR 2014-2019

Fitness Bands And Other Activity Trackers

Rest Of Wearables Market

Smartwatches

Source: BI Intelligence Estimates
Improving indoor living

You've changed your diet, you're exercising. It's time to improve your environment.

CubeSensors
A SENSOR FOR EVERYTHING...

QUANTIFIED SELF
SMARTPHONE SENSORS

- Magnetometer
- Proximity & ambient light sensors
- Magnetic field
- Yaw
- Roll
- Pitch
- Gyroscopic sensor
- Accelerometer
- Cameras front & back
- GPS sensor
- Microphone

Steps
Speed
Altitude
Heart rate
Calories
Distance
Fat

Symantec.
Be happy on the inside 😊

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